S/0181/64/006/001/0058/0064

ACCESSION NR: AP4011737

AUTHOR: Poplavko, Yu. M.

TITLE: Dispersion of the dielectric constant in ferroelectrics of the barium titanate type

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 58-64

TOPIC TAGS: dielectric constant, dielectric constant dispersion, ferroelectric, barium titanate, dielectric loss, barium zirconate, barium stannate, ceramic material

ABSTRACT: Investigations were made on the frequency dependence of dielectric constant and dielectric loss of single crystals of the ceramic material barium titanate. The results are summarized in Fig. 1 on the Enclosure. Measurements were made on standard apparatus in the frequency range $50-1.6\cdot10^{10}$ cycles in weak electrical fields. Dispersion of the dielectric constant was observed at frequencies of 10^8-10^{10} cycles. The application of a strong steady displacement field did not noticeably shift the central region of dispersion. In the region of high-frequency dispersion the dielectric loss decreased considerably on application of the displacement field, more so than at low frequencies. The dielectric constant

Card 1/3

ACCESSION NR: AP4011737

changes much less, however, on application of the displacement field at high frequencies than at low frequencies. It was found that the dielectric constant might be changed by a factor of 2-2.5, depending on the displacement field. Introduction of barium zirconate and barium stannate into barium titanate reduced the dielectric loss and increased the dielectric constant. Orig. art. has: 5 figures and 3 tables.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnical Institute)

SUBMITTED: 27Sep62 DATE ACQ: 14Feb64 ENCL: 01

SUB CODE: PH NO REF SOV: 011 OTHER: 004

Card 2/2

ACCESSION NR: AP4017606 S/0109/64/009/002/0347/0349

AUTHOR: Nekrasov, M. M.; Poplavko, Yu. M.

TITLE: Potentialities of using electrostriction in waveguide devices

SOURCE: Radiotekhnika i elektronika, v. 9, no. 2, 1964, 347-349

TOPIC TAGS: electrostriction, ferroelectric, ferroelectric ceramic, barium titanate, waveguide, slot attenuator, electrostriction controlled slot attenuator

ABSTRACT: An elongation of over 0.05% was obtained in specimens of a solid solution of barium zirconate or barium stannate in barium titanate under the influence of an electric field of 10 kv/cm. A laboratory hookup representing a superhigh-frequency electrostriction slot attenuator (see Enclosure 1) was tested at 9.4 Gcps. Control of the through-signal power (see curves) can be accomplished by varying not only the attenuation of the electrostrictive element but also the reflections from this element. Also, an AM of an shf signal by a

Card 1/2

ACCESSION NR: AP4017606

sinusoidal voltage at 50 cps - 5 kc was experimented with; the resulting modulation frequency was equal to double control frequency, and the modulation percentage was 50-60%. Orig. art. has: 1 figure.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiev Polytechnic Institute)

SUBMITTED: 12Dec62 DATE ACQ: 18Mar64 ENCL: 01

SUB CODE: GE NO REF SOV: 004 OTHER: 000

Card 2/3

POPLAVKO, Yu.M.

Ferroelectric substances with regulated specific inductive capacitance in a wave guide. Radiotekhnika 18 no.10:22-29 O '63. (MIRA 16:12)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi im. A.S.Popova.

POPLAVKO, Yu.M.

Dispersion of dielectric permeability in ferroelectrics of the barium titanate type. Fiz. tver. tela 6 no.1:58-64 Ja '64. (MIRA 17:2)

1. Kiyevskiy politekhnicheskiy institut.

39435
S/109/62/007/008/014/015
D409/D301

9,1310
9,2186 (also 4205)

AUTHOR: Poplavko, Yu.M.

TITLE: Electrically-controlled microwave devices of ferro-electric ceramics

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 8, 1962, 1458-1460

TEXT: Models of ferro-electric microwave devices are described, which can be used as phase-inverters and amplitude modulators, respectively. In designing these models, two properties of ferro-electric ceramics were used: under the effect of the controlling field the permittivity ε changes, whereas the change in the dielectric-loss angle $tg\,\delta$ is negligible (this is called β-type characteristic, used in phase-inverters and phase modulators); the converse property (α-type), (change in $tg\,\delta$ and negligible change in μ), is used in amplitude modulators and attenuators. A figure shows the dependence of μ and $tg\,\delta$ on the field strength $E_{contr.}$

IX

Card 1/3

Electrically-controlled microwave ...

at a frequency of 9380 Mc., for barium-titanate specimens ($BaTiO_3$ with small admixtures, and $Ba(TiZr)O_3$). The operating principle of the devices is as follows: The ferro-electric plate is placed in a standard waveguide, in the way of the microwave signal. Changes in the control voltage lead to changes in μ (or $tg\,\delta$), and hence in the phase propagation-constant β (or absorption α) of the section of the waveguide, containing the ferro-electric. The operating point is taken at E_{op} = 500 volt/mm. The authors used rectangular waveguides, but H- or parallel-plate waveguides should be more convenient for reducing the control voltage. Design formulas for the device are derived. The ratio of modulated-signal maximum to minimum for a ferro-electric ceramic of length l is expressed by:

$$20 \lg \frac{U_{max}}{U_{min}} = \Delta \alpha l .$$

The first amplitude-modulator models for 3.5 - 3.1 cm-waves, had a modulation of up to 30%, with a 6 db. damping. A phase-inverter of similar wave-range and length 0.15 cm, had a damping of 8 db. The

Card 2/3

Electrically-controlled microwave ...

power, used for control, does not exceed a few milliwatts. The described device is compact and broadband. The above study furnished experimental proof of the feasibility of designing ferro-electric microwave devices. There are 2 figures.

SUBMITTED: February 26, 1962

X

Card 3/3

9,2110(1043,1145, 1153)

85019
S/048/60/024/010/028/033
B013/B063

AUTHORS: Nekrasov, M. M. and Poplavko, Yu. M.

TITLE: Solid Solutions of the Ternary Piezoelectric System $Ba(Ti, Zr, Sn)O_3$

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 10, pp. 1289-1290

TEXT: The authors studied the dielectric properties of solid solutions of the $Ba(Ti, Zr, Sn)O_3$ system of different compositions (Fig. 1a). The temperature dependence of the dielectric constant and of the phase angle tangent were measured with a Tesla bridge. Various concentrations of zirconate and stannate have an additive effect on the temperature shift of the phase transitions (Fig. 1b). Near the point of coincidence of the phase transitions, solid solutions exhibit a considerable non-linearity, the dielectric losses being comparatively small. For numerous solid solutions, the authors studied the dielectric constant and the phase angle tangent as functions of the field strength of the constant and the

Solid Solutions of the Ternary Piezoelectric System $Ba(Ti, Zr, Sn)O_3$

alternating field. The resulting curves (Fig. 2) represent both the effective and the reversible non-linearity. Since the quality of a non-linear capacitor depends not only on the reversible non-linearity $N_p = (1/\varepsilon) \cdot d\varepsilon/dE$, but also on the dielectric losses, the authors suggest characterizing it by the coefficient $K = |N_p|_{max}/\tan\delta$. Of the solid solutions studied by the authors, $Ba(Ti_{0.85}, Zr_{0.11}, Sn_{0.04})O_3$ has the highest value of K (K = 12), at which $N_p = 0.9$ cm kv for $\varepsilon_{max}/\varepsilon_{min} = 20$, $\tan\delta = 0.03$ in weak fields, and $\tan\delta = 0.15$ at a maximum. The present paper was read at the Third Conference on Piezoelectricity, which took place in Moscow from January 25 to 30, 1960. There are 2 figures and 8 references: 7 Soviet.

Card 2/2

S/181/62/004/004/041/042
B102/B104

9,2571

AUTHOR: Poplavko, Yu. M.

TITLE: Ferroelectric properties of barium titanate in the shf centimeter range

PERIODICAL: Fizika tverdogo tela, v. 4, no. 4, 1962, 1069-1071

TEXT: The author investigated the effect of electrical displacement upon the properties of $BaTiO_3$ in an shf range far from the dispersion frequency ($2\text{-}3\cdot10^9$ cps); it is studied inhowfar the great difference in ε and $\tan\delta$ at shf and low frequencies can be due to dispersion of ε (Ref. 1: Proc. Inst. El. Eng., 96, 383, 1949). $\varepsilon = \varepsilon' + i\varepsilon''$ is determined from the propagation of a H_{10} wave in a standard square waveguide (Ref. 1). All measurements were made in weak shf fields, with an upper frequency limit of $3.72\cdot10^{10}$ cps. At 9380 Mc/sec ($\lambda = 3.2$ cm) ε decreases by 27% when the d-c field strength increases from zero to 10 kv/cm, and $\tan\delta$ by ~50%. This fact speaks in favor of the assumption that the increased $\tan\delta$ at shf is due to domain relaxations and that an anisotropy of ε in the domains

Card 1/2

Ferroelectric properties of barium ...

occurs also at shf cm-waves. M. M. Nekrasov is thanked for discussions. There are 2 figures.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnic Institute)

SUBMITTED: December 25, 1961

POPLAVKO, Yu.M.

Electrically controlled seigneto-ceramic microwave devices. Radiotekh. i elektron. 7 no.8:1458-1460 Ag '62. (MIRA 15:8)
(Microwaves--Equipment and supplies)

82982
S/181/60/002/008/001/045
B006/B070

24.7800

AUTHORS: Nekrasov, M. M., Poplavko, Yu. M.

TITLE: The Seignettoelectric Properties of Solid Solutions of the Ternary System $Ba(Ti,Zr,Sn)O_3$

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 8, pp. 1681-1684

TEXT: In the present work, some problems of the preparation of seignettoelectric ceramics with large non-linearity and comparatively small losses are discussed. The non-linearity of ceramic capacitors is of great importance in radio-electronics. The properties of the binary systems $(Ba,Sr)TiO_3$, $Ba(Ti,Zr)O_3$, and $Ba(Ti,Sn)O_3$, which show a large non-linearity, were previously studied by G. A. Smolenskiy et al., A. L. Khodakov, V. A. Bokov, and T. N. Verbitskaya (Refs. 1-13). On the basis of these systems, non-linear capacitors - the so-called varicapacitors - are commercially produced. They have, however, some flaws, for which reason new materials with better properties are sought to be obtained. The authors investigated many different compositions of the system mentioned

Card 1/3

82982

The Seignettoelectric Properties of Solid Solutions of the Ternary System $Ba(Ti,Zr,Sn)O_3$

S/181/60/002/008/001/045
B006/B070

in the title in order to obtain the optimum composition (small losses for maximum non-linearity of the curve $\varepsilon(E)$). For the preparation of the samples (15 mm large tablets), $BaCO_3$, TiO_3, ZrO_2, and SnO_2 were used as the starting material; barium titanate, -zirconate, and -stannate were synthesized at 1200°C. The dependence of the temperature of phase transition on the composition of $BaZrO_3$ - $BaTiO_3$ - $BaSnO_3$ was investigated for these samples. The effects of the individual components on the position of the Curie point (i.e., the temperature of phase transition from cubic to tetragonal symmetry) is discussed in detail. Thus, for example, it is found that an increase of zirconate or stannate reduces the Curie point while the temperatures of other transitions increase. Thus, the three transitions never coincide. Fig. 2 shows the concentration triangle of the investigated system; the region in which no seignetto-electric solutions are found is shaded; the investigated compounds lying in the $BaTiO_3$ corner are noted. It was found that the composition $Ba(Ti_{0.85}, Zr_{0.11}, Sn_{0.04})O_3$ shows the optimum properties. For this composition, the reverse characteristics $\varepsilon(E)$ are shown in Fig. 3.

Card 2/3

DIMAROVA, Ye. N.; POPLAVKO, Yu.M.

Temperature deperdence of the thermal conductivity of triglycine sulfate. Fiz. tver. tela 6 no.9:2878-2879 S '64. (MIRA 17:11)

ACC NR: AP7005859 SOURCE CODE: UR/0181/66/008/012/3639/3641

AUTHOR: Yazytskiy, B. Ya.; Poplavko, Yu. M.

ORG: Kiev Polytechnic Institute (Kiyevskiy politekhnicheskiy institut)

TITLE: Concerning microwave dispersion in barium titanate above the Curie point

SOURCE: Fizika tverdogo tela, v. 8, no. 12, 1966. 3639-3641

TOPIC TAGS: barium titanate, Curie point, electromagnetic wave dispersion, dielectric constant, temperature dependence, phase transition, paraelectricity

ABSTRACT: In view of the low accuracy of earlier investigations, the authors measured the temperature dependence of the dielectric constant of $BaTiO_3$ in the vicinity of the phase transition by using a special waveguide-resonator method developed earlier (ZhETF v. 43, 800, 1962). The only experimental data used were those obtained at resonances at multiples of one-quarter of the wavelength of the sample placed in the waveguide. This, in conjunction with exact computer calculations, made it possible to determine the dielectric constant accurate to 3%. The temperature dependence of the dielectric constant and of the dielectric losses was measured at 9.4 and at 37 GHz. (This is the first time that measurements on $BaTiO_3$ were made at such high frequency.) The results show that no dispersion takes place above the Curie point. The 37-GHz investigations have also shown that there is no dispersion in the paraelectric phase, just as there is none at lower frequencies. Orig. art. has: 1 figure.

SUB CODE: 20/ SUBM DATE: 02Jun66/ ORIG REF: 003/ OTH REF: 008

Card 1/1

NEKRASOV, M.M.; POPLAVKO, Yu.M.

Possibility of using electrostriction in waveguide technology. Radiotekh. i elektron. 9 no.2:347-349 F '64. (MIRA 17:3)

1. Kiyevskiy ordena Lenina politekhnicheskiy institut.

05363
SOV/102-59-1-7/12

AUTHORS: Nekrasov, M.M. and Poplavko, Yu.M.

TITLE: Nonlinear Ferroelectric Capacitors

PERIODICAL: Avtomatika, 1959, Nr 1, pp 70-78 (USSR)

ABSTRACT: The capacitors are of a new type with dielectrics made from a three-component system (not given). The table (p 71) gives the effective dielectric constant (for small voltage swings), tan δ and C_{max}/UC_{min}, where U is the effective value of the a.c. voltage. Fig 1 shows hysteresis loops. The nonlinearity is greatest at voltage gradients of 75 to 100 V/mm. Fig 2 shows curves taken at 100 c/s with various values of a.c. and d.c. fields (in V/mm), where $E_{=}$ denotes d.c. and $E_{\sim}$ a.c. Fig 3 shows values for 100, 500, 800, 1000, 1500, 2000, 3,000 and 5000 c/s (a - for low voltages; b - for high voltages). Fig 4 shows ε and tan δ as functions of temperature at 1000 c/s. Fig 5 shows ε and tan δ as functions of voltage for two different specimens; Fig 6 gives data recorded at 100 and 1000 c/s for the specimen of Fig 4 at temperatures from 22 to 95°C (note errors in second diagram). The Curie point is 62°C. Fig 7 and 8 illustrate applications, namely a modulator

Card 1/2

L 06426-67 EWT(1)/EWT(m)/EWP(j) LJP(c) GG/RM

ACC NR: AP6026701 SOURCE CODE: UR/0181/66/008/008/2455/2457

38
B

AUTHOR: Poplavko, Yu. M.; Solomonova, L. P.

ORG: Kiev Polytechnic Institute (Kievskiy politekhnicheskiy institut)

TITLE: Dielectric relaxation in triglycine sulfate crystals

SOURCE: Fizika tverdogo tela, v. 8, no. 8, 1966, 2455-2457

TOPIC TAGS: dielectric property, sulfate, glycine, ferroelectric crystal

ABSTRACT: The dielectric relaxation of triglycine sulfate (TGS) was studied over a wide frequency range (10^2-10^{10} cps), and the relaxation spectrum was analyzed. Two regions of dielectric relaxation were observed. In the first (low-frequency) region, the increase of ϵ' and $\tan\delta$ with decreasing frequency may be due to the fact that process of reorientation of the domains begins to manifest itself even in low electric fields. In the second region (10^5-10^7 cps), the relaxation spectrum is more diffuse than in the case of classical Debye relaxation. The relaxation time obtained was 10^{-6} - 5×10^{-7} sec. The relaxation spectrum of the TGS crystals changes radically when a bias electric field is applied: ϵ' and $\tan\delta$ decrease in a strong field (E_b = 7 kV/cm) and the spectrum becomes more diffuse. On the other hand, at E_b = 0.02-0.04 kV/cm, $\tan\delta$ increases substantially (by a factor of 20-40 in some crystals), but the value of $\tan\delta_{max}$ does not remain constant and in 20-100 sec drops by 30-50%. The increase of the dielectric loss of TGS in the vicinity of the domain relaxation at

Card 1/2

L 06426-67

ACC NR: AP6026701

a weak subpolarization is apparently due to the appearance of nuclei of new domains; this leads to a more intense relaxation, since the concentration of domain walls in the crystal increases considerably. This explanation accounts for both the time instability of the effect described and for its hysteresis-type character. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 03Sep65/ ORIG REF: 004/ OTH REF: 005

Card 2/2

L 19898-63 EWT(1)/BDS AFFTC GW

ACCESSION NR: AR3004391 S/0274/63/000/005/A038/A038

SOURCE: RZh. Radiotekhnika i elektrosvyaz', Abs. 5A214P

AUTHOR: Bass, F.G., Braude, S.Ya., Poplavko, Yu.V.

TITLE: Determination of statistical parameters of marine turbulence according to radio measurements in the medium and high frequencies

CITED SOURCE: Sb. Radiookeanogr. issled. morsk. volneniya, Kiyev, AN ChSSR, 1962, 96-115

TOPIC TAGS: marine turbulence, oceanography, radio measurement, diffused wave

TRANSLATION: The authors present a theoretical discussion of the problem of the diffusion of radio waves from inhomogeneities on a marine surface in the form of waves and ridges. A determination is made of the dependence of the properties of diffused waves on the parameters of marine turbulence, and the use of this dependence in practical measurements is proposed. The authors conclude that the radiooceanographic measurements have a number of advantages over the methods of studying the elements of marine turbulence described in the literature, in that

Card 1/2

L 19898-63

ACCESSION NR: AR3004391

0

they make it possible to determine certain quantities formerly not measured in oceanography. Ten illustrations. Bibliography with 43 titles. V.S.

DATE ACQ: 25Jun63 SUB CODE: AS ENCL: 00

Card 2/2

L 16842-63 EWT(1)/BDS AFFTC GW

ACCESSION NR: AR3006325 S/0058/63/000/007/H029/H029

52

SOURCE: RZh. Fizika, Abs. 7Zh194

AUTHOR: Bass, F. G.; Braude, S. Ya.; Poplavko, Yu. V.

TITLE: Determination of statistical parameters of sea waves from measurements made at short and medium radio waves

CITED SOURCE: Sb. Radiookeanogr. issled morsk. volneniya. Kiyev, AN USSR, 1962, 96-115

TOPIC TAGS: radio wave propagation, sea surface, scattering, short wave , medium wave

TRANSLATION: On the basis of the result of the preceding work (Abstract 7Zh192), calculation formulas are obtained for the scattering of electromagnetic waves by sea waves, making it possible to determine the parameters of the sea waves. The calculated data are

Card 1/2

Card

L 16842-63

ACCESSION NR: AR3006325

compared with experimental results obtained at wavelengths from 10 to 240 meters (Abstracts 7Zh199 -- 191). It is shown that in order to find the radii of correlation and the mean square of the height of the sea waves it is necessary to measure the scattered signals at two wavelengths and to find its angular distribution in space. An interpretation is presented for the frequency spectrum of the scattered field and its structure at different distances. Bibliography, 43 titles. F. Bass.

DATE ACQ: 15Aug63 SUB CODE: PH, GE ENCL: 00

Card 2/2

L 05624-67 EWT(m)/T/EWP(t)/ETI IJP(c) JD/JH

ACC NR: AP6024496 SOURCE CODE: UR/0181/66/008/007/2238/2240

AUTHOR: Poplavnoy, A. S.

ORG: Tomsk State University (Tomskiy gosudarstvennyy universitet)

TITLE: Structure of energy bands of aluminum phosphide

SOURCE: Fizika tverdogo tela, v. 8, no. 7, 1966, 2238-2240

TOPIC TAGS: aluminum compound, phosphide, energy band structure, Brillouin zone, forbidden band width, valence band, conduction band

ABSTRACT: The author calculates the structure of the energy bands of AlP, determining the Fourier components of the effective potential from the Fourier coefficients of silicon, obtained in turn from experimental data by D. Brust et al. (Phys. Rev. Lett. v. 9, 94, 1962 and elsewhere), since these parameters change by an amount equal to the perturbation of the effective potential on going from Si to AlP. The effective potential of Si and AlP was calculated by the formula of J. Phillips and L. Kleinman (Phys. Rev. v. 116, 287, 1959). The parameters obtained are used to calculate the energy spectrum in certain symmetrical points of the Brillouin zone. A plot of the band structure is presented. The width of the forbidden band obtained as a result of the calculation, 2.4 ev, is in satisfactory agreement with experiment. The position of the vertex of the top of the valence band and of the bottom of the conduction band also agree with experiment. The author thanks V. A. Chaldyshev and G. F. Karavayev for discussions. Orig. art. has: 2 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 22Dec65/ OTH REF: 008

Card 1/1 egh

L 04796-67 EWT(1) LIP(c) AT SOURCE CODE: UR/0181/66/008/007/2143/2148
ACC NR: AP6024480

50
49
B

AUTHOR: Karavayev, G. F.; Poplavnoy, A. S.

ORG: Tomsk State University (Tomskiy gosudarstvennyy universitet)

TITLE: Investigation of the energy spectrum of electrons in semiconductor compounds with a chalcopyrite lattice, using perturbation theory

SOURCE: Fizika tverdogo tela, v. 8, no. 7, 1966, 2143-2148

TOPIC TAGS: energy band structure, crystal symmetry, perturbation theory, group theory, zinc compound, valence band

ABSTRACT: The authors developed a method for calculating the structure of the energy bands of compounds $A^{III}B^{IV}C_2^V$ and $A^IB^{III}C_2^{VI}$. The method is similar to the perturbation method developed by F. Herman (J. Phys. Chem. Sol. v. 8, 380, 1959 and earlier) and is based on the results of a group-theoretical investigation of the lattices of zinc blende and chalcopyrites, as well as earlier results by one of the authors (Karavayev, with V. A. Chaldyshev, Izv. Vuzov SSSR, Fizika, v. 5, 103, 1963), where compatibility relations were obtained for the representations of the symmetry groups of these lattices. The structure of the energy spectrum of $A^{III}B^V$ is taken to be as the unperturbed structure. The perturbation potential is defined as the difference between the potential of the chalcopyrite and the potential of the zinc blende. The

Card 1/2

POPLAVNOY, P.

USSR/Cultivable Plants - General Problems.

M-1

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10639

Author : Poplavnoy, P.
Inst :
Title : Crop Rotations in the Middle Belt of Siberia.

Orig Pub : S. Kh. Sibiri, 1956, No 4, 44-46.

Abstract : Neither the system of grass-field crop rotation proposed by V.P. Vil'yams nor the agricultural system developed by T.S. Mal'tsev are applicable in the middle belt of Siberia. A firm fodder base cannot be created only by sowing annual grasses. Therefore it is recommended that grass-field crop rotations, with one year utilization of perennial grasses, be tested.

Card 1/1

44015
S/860/61/000/000/010/020
A006/A101

AUTHORS: Poplavko-Mikhaylov, M. V., Manuylov, N. N., Gruzdeva, L. A., Tyanin, A. V.

TITLE: A method of gas-shielded flash-welding of aluminum-beryllium alloy

SOURCE: Sbornik izobreteniy; svarochnaya tekhnika. Kom. po delam izobr. i otkrytiy. Moscow, Tsentr. byuro tekhn. inform. 1961, 131 - 132 (Authors' Certificate no. 121519, cl. 21h, 30_{12}, no. 611742 of November 14, 1958)

TEXT: The proposed method yields high-quality tight welds due to the flux which is composed of chloride and fluoride salts and their mixtures. Base metal, aluminum, or aluminum-alloy rods or wires are used as filler metal. The method can be used in manual automatic and semi-automatic welding with consumable or non-consumable electrode in argon or helium atmosphere. Prior to welding the edges of the metal to be welded are flux-covered on the reverse side.

Card 1/1

0701 1722

L 6911-66 EWT(m)/EWP(k)/EWA(c)/T/EWP(b)/EWP(v)/EWP(t) IJP(c) JD/HM

ACCESSION NR: AP5000060 S/0286/64/000/021/0068/0068

55,44 55,44

AUTHOR: Glazunov, S. G.; Gruzdova, L. A.; Moiseyev, V. N.; Poplavko-Mikhaylov, M. V.; Khorev, A. I.; Mikhaylov, B. M. 45 B

55,44 55,44 55,44 55,44

TITLE: Filler material for welding titanium alloys with a high content of β-phase. Class 49, No. 166221 55,44,15 44,55,27

SOURCE: Byul. izobr. i tovar. znakov, no. 21, 1964, 68

TOPIC TAGS: titanium, titanium alloy, beta titanium alloy, welding, filler wire, electrode wire

ABSTRACT: This Author Certificate introduces a titanium-base filler alloy for welding titanium alloys with a high content of β-phase. To make the filler suitable for any such titanium alloys and to improve the ductility of the weld metal, the filler alloy contains 1—3% Al and 8—10% Mo.

ASSOCIATION: none

SUBMITTED: 16Oct61 ENCL: 00 SUB CODE: MM, IE

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3148

Card 1/1 nds

11 (2, 4) PHASE I BOOK EXPLOITATION SOV/2213

Groznyy. Neftyanoy nauchno-issledovatel'skiy institut

Khimiya i tekhnologiya pererabotki nefti i gaza (Chemistry and Technology of Petroleum and Gas Refining Processes) Moscow, Gostoptekhizdat, 1959. 278 p. (Series: Its: Trudy, vyp. 4) 2,500 copies printed.

Executive Ed.: T.D. Yefremova; Tech. Ed.: A.S. Polosina; Editorial Board: A.Z. Dorogochinskiy (Chairman), B.K. Amerik, G.I. Kaz'min, N.M. Kamakin, V.I. Lavrent'yev, Ye.S. Levchenko, and M.G. Mitrofanov (Deputy Chairman).

PURPOSE: This book is intended for petroleum engineers and technicians in scientific research institutes, planning organizations, and refineries.

COVERAGE: This collection of technical papers on oil and gas refining were originally discussed at the petroleum refining section of the Third GrozNII Scientific-Technical Congress in 1957. The articles have been published to help further the development of the petroleum

Card 1/9

refining industry and petrochemical industry in the Chechen-Ingush ASSR. The history and significance of the petroleum refining industry in the Groznyy region is outlined by A.Z. Dorogochinskiy with emphasis on the interdependence of the refineries and the aircraft, automobile and rocket manufacturing industries. Change in modern engines demand a change in fuel and lubricating oil properties. The increased use of jet aircraft makes the production of high octane aviation gasoline less important than the production of the new type of fuel, aviation kerosene, the yield of which requires a quite different refinery run. Since crudes recovered at the Karabulak-Achaluki fields represent a valuable raw material for manufacturing lubricating oil and paraffin wax, their properties have been thoroughly investigated and results of analyses reviewed. The re-equipment of the fuel producing line of refineries at Groznyy has been carried out on the basis of findings obtained from tests and pilot plant operations, and a number of reforming and platforming units have been built to upgrade the low octane gasoline produced at Groznyy. Tests were also conducted to ascertain the advisability of applying the destructive distillation of residues, which yields solar fractions badly needed for catalytic-cracking unit as feed stock. Catalytic cracking units of the 43-102 type were first put on stream in the

Groznyy refineries in 1952, and since that time continuous efforts have been made to boost their processing capacity, and improve the regeneration of catalysts. The authors make a number of suggestions as to how the throughput of the above units might be increased. The production of different types of pelleted and bead catalysts, the contamination of catalysts and their reactivation are discussed. The operation of a contact coking reactor, its design, and products yielded by contact coking units are described. The authors also deal with the manufacture of lubricating oils, paraffin and ceresine wax and indicate way of improving their properties. Electrical dehydration and desalting of crude oil and of light products are discussed. The authors state that in recent years extensive studies were made on the chemical conversion of petroleum products, and particularly of gases. As a result, a number of gas fractionators and compressors were built and installed to produce phenol and acetone from propylene and benzene, to synthesize ethyl alcohol and oxidize paraffinic hydrocarbons. An article is devoted to problems of automating various processes and developing the related control and gage instruments. The book

contains numerous tables with the characteristics of different petroleum products obtained from refinery processing units, pilot plants and petrochemical refinery sections. Each article is accompanied by references.

TABLE OF CONTENTS:

II. IMPROVEMENTS IN THE FUEL PRODUCING LINE OF REFINERIES

III. IMPROVEMENTS IN THE LUBE OIL AND PARAFFIN WAX PRODUCING LINE OF REFINERIES

AVAILABLE: Library of Congress

TM/ad
8-24-59

Card 9/9

POPLAVSKAYA, A.G.

Effect of aminazine on the secretary function of kidneys. Trudy Oren. otd. Vses. fiziol. ob-va no.2:100-104 '60. (MIRA 16:8)

1. Kafedra farmakologii (zav. - prof. A.A. Lyubushin) Orenburgskogo meditsinskogo instituta.
(KIDNEYS) (CHLORPROMAZINE)

BORTSOVA, M.P.; GAMAYUNOVA, P.B.; POPLAVSKAYA, A.V.; SHPICHKO, N.P.; PAVLOV, G.D.; PODUNOVA, A.T.; LOVA, N.I.; ALEKSANDROVA, R.P.; ATARUKOV, A.G.; VOROB'YEVA, Ye.I.; GAN'YANTS, E.M.; GELLER, D.Ya.; PARSHINA, M.A.; FILINA, R.A.; CHUVELYAYEVA, Ye.S.

Selecting demulsifiers for crude oils processed in Groznyi refineries. Trudy GrozNII no.4:17-26 '59. (MIRA 12:9)

1.Groznenskiy neftyanoy nauchno-issledovatel'skiy institut (GrozNII) (for Pavlov, Podunova, Lova).
(Groznyi--Petroleum--Refining)

POPLAVSKAYA, A.V.; BASHKIROVA, L.I.

Obtaining Au spindle oil from Anastas'evka oil. Nefteper. i neftekhim. (MIRA 17:9)
no.6:12-13 '64.

1. Groznenskiy neftepererabatyvayushchiy zavod.

L 45721-66 EWT(m)/T WE

ACC NR: AP6026498 (A) SOURCE CODE: UR/0318/66/000/005/0007/0009

AUTHOR: Bondarenko, N. I.; Poplavskaya, A. V.; Bashkirova, L. I.; Ligitsina, N.

ORG: Groznyy Petroleum Refinery (Groznenskiy neftepererabatyvayushchiy zavod) 33

TITLE: Coke solar stock for producing gas-turbine fuels 13

SOURCE: Neftepererabotka i neftekhimiya, no. 5, 1966, 7-9

TOPIC TAGS: coke, solar oil, gas turbine fuel

ABSTRACT: Coke solar oil was obtained from the residue of thermal cracking of mazuts, and its potential as a source of gas-turbine fuel was investigated along the following lines: (1) separation from the coke solar oil of a fraction meeting the requirements of GOST 10433-63 for gas-turbine fuel; (2) expanding the resources of gas-turbine fuel by widening the boiling range, this being accomplished by introducing coke-solar oil fractions boiling above 410° and depressing the solification temperature by adding a depressor; (3) decreasing the content of high-melting components of the coke solar oil by their decomposition as a result of secondary distillation of the solar oil. It was found that a standard gas-turbine fuel could be obtained in the amount of ~48%. The addition of the depressor permitted an 81-85% expansion of the resources of the fuel. Gas-turbine fuel of standard quality can be obtained both by distilling coke solar oil and by direct separation in coking stills. Orig. art. has: 2 tables.

SUB CODE: 11/ SUBM DATE: none

UDC: 665.642.4-404.002.3:665.637.6

Card 1/1 UCR

POPLAVSKAYA, G. I.

DECEASED

see ILC

Botany

POPLAVSKAYA, G. M. and SUKACHEV, V. N.

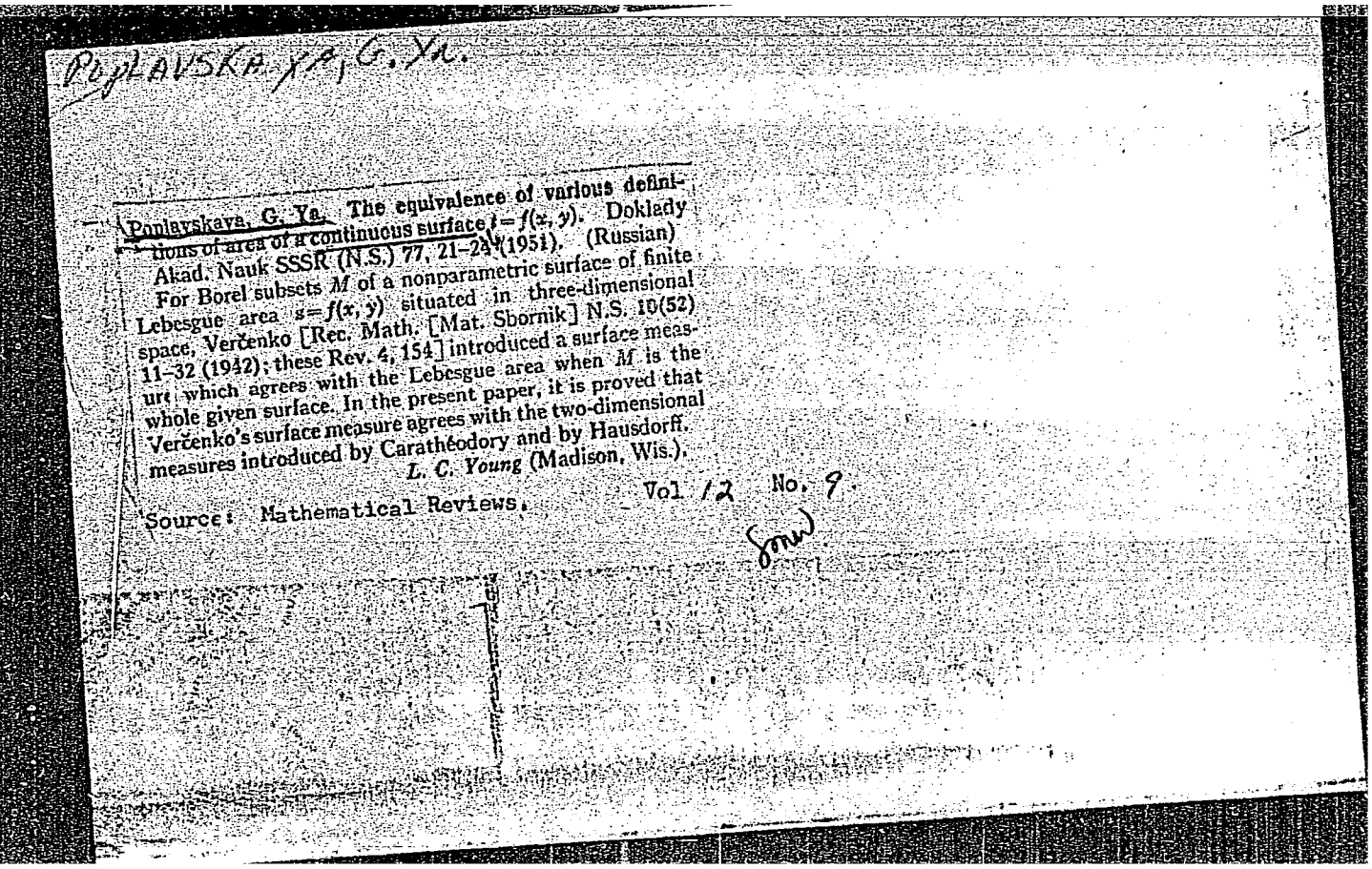
"Outline of the History of the Lakes and Vegetation of the Middle Urals," Byull. Komm. po izuch. chetv. perioda [Bulletin of Commission for Study of the Quartenary Period], No 8, 1946.

POPLAVSKAYA, G. Ya. Cand. Physicomath Sci.

Dissertation: "Equivalence of Various Determinations of the Area of Continuous Surface t-f (x,y)."

13/12/50
Sci. Res. Inst. of Mechanics and Mathematics,
Moscow Order of Lenin State U. imeni. M. V. Lomonosov.

SO Vecheryaya Moskva
Sum 71



Poplavskaya, G. Ya.

Poplavskaya, G. Ya. The equivalence of various definitions of area of a continuous surface $z=f(x, y)$. Doklady Akad. Nauk SSSR (N.S.) 77, 21–24 (1951). (Russian)

For Borel subsets M of a nonparametric surface of finite Lebesgue area $z=f(x, y)$ situated in three-dimensional space, Verčenko [Rec. Math. [Mat. Sbornik] N.S. 10(52) 11–32 (1942); these Rev. 4, 154] introduced a surface measure which agrees with the Lebesgue area when M is the whole given surface. In the present paper, it is proved that Verčenko's surface measure agrees with the two-dimensional measures introduced by Carathéodory and by Hausdorff.

L. C. Young (Madison, Wis.).

Source: Mathematical Reviews, Vol 12 No. 9.

(Sow)

USSR/Mathematics - Surfaces May/Jun 52

"Equivalence of the Various Definitions of the Area of a Continuous Surface," G. Ya. Poplavskaya, Khar'kov

"Matemat Sbor" Vol XXX (72), No 3, pp 651-668

Current article is devoted to solving the problem concerning the coincidence of the measures of sets of zero surface measure which are disposed on a unique continuous surface z = f(x,y) of finite Lebesgue area. A. N. Kolmogorov and G. Nobeling solved the 2d companion problem concerning the

217T72

POPLAVSKAYA, G. YA., KHAR'KOV

coincidence of the areas of surfaces satisfying the Lipschitz condition. Analogously there exist various methods for detg the lengths of arcs, in which case Kolmogorov demonstrated the coincidence of lengths. Submitted 28 Dec 51.

217T72

POPLAVSKAYA, I.A.; GORYAYEV, M.I.

Synthesis of 2,2,3-trimethyl-β-N,N-di(2-chloroethyl) amino-ethyl-3-cyclopentene hydrochloride. Zhur. ob. khim. 33 no.5: 1495-1496 My '63. (MIRA 16:6)
(Cyclopentene) (Pinene)

POPLAVSKAYA, I.A.; GORYAYEV, M.I.

Synthesis of 2,2-dimethyl-3-[α-NN-di(2-chloroethyl)aminoethyl] cyclobutylacetic acid hydrochloride. Zhur. ob. khim. 33 no.5: 1492-1495 My '63. (MIRA 16:6)

(Acetic acid) (Pinene)

POPLAVSKAYA, I. A.; GORYAYEV, M. I.

Synthesis of α-N,N-di(2-chloroethyl) amino- σ-isonitroso-acetone hydrochloride. Zhur. ob. khim. 33 no.1:295-296 '63. (MIRA 16:1)

(Acetone) (Nitroso compounds)

SHCHERBOV, Dmitriy Pavlovich; KLIMOV, Vsevolod Valentinovich;
POPLAVSKAYA, I.A., otv.red.; CHASOVIKOVA, Z.I., tekhn.red.

[Photometric titration in the analysis of minerals] Fotometricheskoe titrovanie v analize mineral'nogo syr'ia. Alma-Ata, TSentr.in-t nauchno-tekhn.informatsii, 1958. 15 p.
(MIRA 13:9)

(Minerals) (Magnesium--Analysis) (Calcium--Analysis)

ACCESSION NR: AP4010878 S/0210/63/000/011/0106/0113

AUTHORS: Poplavskaya, L. N.; Volkova, L. F.; Zhuk, F. D.

TITLE: Seismicity of the Far East for 1961

SOURCE: Geologiya i geofizika, no. 11, 1963, 106-113

TOPIC TAGS: seismicity, Far East, epicenter, deep focus, earthquake, deep focus earthquake

ABSTRACT: This paper is a summary of instrumental and macroseismic data for earthquakes in the Far East during 1961. Epicenters were located by the methods considered most effective for that region: 1 - average lines, 2 - equal distances from stations, 3 - intersections for t_p, and 4 - master curves for isochrons of t_p and S-P. The first was most commonly used in combination with the third. The accuracy of locating epicenters was generally within 20-25 km. The epicenter of deep-focus earthquakes was easily located by one of the above methods. The depth of focus was generally found by difference in the S-P and sP-P phases, but difficulties were encountered because, firstly, the S-P travel-time curves for the depth 20-50 km within the epicentral interval 1.5-15° were difficult to distinguish and,

Card 1/2

ACCESSION NR: AP4010878

secondly, the separation of the sP phase on seismograms of Kurile-Kamchatka earthquakes was frequently impossible. Depth was therefore generally determined by data from near (up to 100 km) and distant (over 1500 km) stations. During the indicated period (1961), 6 earthquakes of group II were recorded ($7\frac{1}{2} > M \geqslant 6\frac{1}{2}$), 18 of group III ($6\frac{1}{2} > M \geqslant 5\frac{1}{4}$), 86 of group IV ($5\frac{1}{4} > M \geqslant 4\frac{1}{4}$), and 132 of group V ($M < 4$). Seismicity for 1961 in the Kamchatka region was considerably lower than in preceding years. All earthquakes with a scale reading greater than 5 are shown in a table. The two largest were: 1 - the earthquake of 12 February, with M = 7, on the island of Shikotan; 80 aftershocks with $3\frac{1}{2} \leqslant M \leqslant 6$ were recorded within 21 hours after the main shock; and 2 - the earthquake of 11 August, 50 km south of Nemuro, with M = 6 3/4. "The authors are deeply grateful to R. Z. Tarakanov and S. L. Solov'yev for valuable suggestions during preparation of this paper." Orig. art. has: 6 figures, 4 tables, and 2 formulas.

ASSOCIATION: Sakhalinskiy kompleksnyy nauchno-issledovatel'skiy institut Sibirskogo otdeleniya AN SSSR, pos. Novo-Aleksandrovsk (Sakhalin Joint Scientific Research Institute of the Siberian Department AN SSSR)

SUBMITTED: 11Dec62 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: AS NO REF SOV: 009 OTHER: 002

Card 2/2

GERCHIKOV, S.V., inzh.; POPLAVSKAYA, L.M., inzh.

Electrical model of an l-p main. Ispol'. gaza v nar. khoz. no.2:126-133 '63. (MIRA 18:9)

1. Laboratoriya raspredelitel'nykh gazovykh setey Saratovskogo gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta po ispol'zovaniya gaza v narodnom khozyaystve.

SOLOV'YEV, S.L.; POPLAVSKAYA, L.N.; MARAYSKIY, M.P.

Earthquake in the western part of Iturup Island on May 7-8, 1962.
Geol. i geofiz. no.7:55-62 '64. (MIRA 18:8)

1. Sakhalinskiy kompleksnyy nauchno-issledovatel'skiy institut Sibirskogo otdeleniya AN SSSR, poselok Novo-Aleksandrovsk.

SMIRNOVA, A.V.; POPLAVSKAYA, N.F.

Use of coal replicas to investigate the structure of patented carbon steel wire. Sbor. trud. TSNIICHM no.24:236-245 '62. (MIRA 15:6)

(Steel—Metallography) (Wire)

AUTHORS: Zalukayev, L. P., Poplavskaya, N. I. SOV/79-29-1-50/74

TITLE: On the So-Called "Di-β-Naphthyl Acetal"(O tak nazyvayemon "di-β-naftilatsetale")

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 238 - 241 (USSR)

ABSTRACT: In the case of action of paraldehyde upon β-naphthol in the mixture of acetic- and hydrochloric acid Claisen (Ref 1) obtained a product with a melting point of 200-201° which he called acetaldehyde-β-naphthyl acetal. Wenzke and Nieuwland (Ref 2) on the other hand synthesized di-β-naphthyl acetal from acetylene and β-naphthol. As far as this product was described as di-β-naphthyl acetal and regarded as an intermediate product in several reactions (Refs 1,3) the authors investigated it in detail. Its formation from acetaldehyde was unlikely as at least formaldehyde does not produce a similar acetal under the mentioned conditions. The latter can only be obtained in the case of longer heating of β-naphthol with methyl iodide in sealed tubes in the presence of alkali (Ref 4). He found that in this case croton aldehyde leads to the same product as acetaldehyde. In the course of an exact analysis it was found that the formation

Card 1/3

of the above mentioned product proceeds from the melting point 200-201° of acetaldehyde and β-naphthol according to the equation $2CH_3CHO+2C_{1o}H_7OH \rightarrow C_{24}H_{2o}O_2+2H_2O$. In the case of heating benzoyl chloride its monobenzoyl derivative is obtained and in the case of boiling with acetic acid anhydride the monobenzoyl derivative is obtained. It contains 1 active hydrogen atom. Saponification of its acetyl derivative leads to the initial product. When distilled it decomposes into β-naphthol and a product with a melting point of 90-92° which corresponds to analysis and molecular weight according to formula $C_{14}H_{14}O$. Thus, the decomposition of "di-β-naphthyl acetal" proceeds according to the scheme $C_{24}H_{2o}O_2 \rightarrow C_{14}H_{14}O+C_{1o}H_7OH$. The mentioned factors show clearly that "di-β-naphthyl acetal" according to Claisen has a structure that is quite different from the structure hitherto assumed. Further reactions and analytical data permit the condensation product from β-naphthol with paraldehyde to be ascribed the formula 4-[1-(2-oxynaphthyl)]-2-methyl-5,6-benzochromane (I). The above

mentioned distillation product with a melting point of 90-92° corresponds to formula (III). There are 9 references, 3 of which are Soviet.

ASSOCIATION: Institut khimii Akademii nauk Latviyskoy SSR (Institute of Chemistry of the Academy of Sciences, Latviyskaya SSR)

SUBMITTED: August 26, 1957

POPLAVSKAYA, T.K.

Heterogeneity of apple scion buds. Biul.nauch.-tekh.inform. TSGL no.2:29-32 '56. (MIRA 12:1)
(Apple) (Grafting)

POPLAVSKAYA, T.K.

Genetic heterogeneity of scions taken from maternal apple trees.
Biul. nauch-tekh. inform. TSGL no.4:39-46 '57. (MIRA 12:1)
(Apple) (Grafting)

POPLAVSKAYA, T.K.

Effective method of utilizing the cutting material taken from maternal apple trees. Biul. nauch.-tekh. inform. TSGL no. 3:45-49 '57. (MIRA 11:8)

(Apple)
(Plant cutting)

POPLAVSKAYA, T.K.

Characteristics of young apple trees developed from buds taken from different places in the crown of the parent tree. Trudy TSGL 6:413-437 '57. (MIRA 12:10)

(Apple) (Budding)

POPLAVSKAYA, T.K.

Using apical buds in vegetative propagation of the apple tree.
Trudy TSGL 6:439-440 '57. (MIRA 12:10)
(Apple) (Budding)

POPLAVSKAYA, T.K., Cand Agr Sci -- (diss) "Study of the transmission of the variety characteristics of ~~the~~ apple trees as a function of ~~in relation to the~~ quality of buds." Michurinsk, 1958, 28 pp with illustrations (Min of Agr USSR. Fruit and Vegetable Inst im I.V. Michurin) 100 copies (KL, 50-58, 126-7)

POPLAVSKAYA, T.K.

Specific features in the development of yearling apple trees from buds originating in different parts of the crown of the parent tree. Biul. nauch. inform. TSGL no.7/8:109-120 '59. (MIRA 13:1)

(Apple) (Budding)

BASMANOV, Petr Iosifovich; POPLAVSKAYA, Vanda Avgustovna; VINOGRADOVA, O.K., red.

[AFA analytical aerosol filters] Analiticheskie aerozol'nye fil'try AFA. Moskva, Atomizdat, 1964. 17 p. (MIRA 18:9)

SHCHEGOLEVA, R.P.; REUTOVA, N.P.; GOLUBEVA, L.S.; POPLAVSKAYA, V.L.; KAZANSKAYA, L.N.

Ceramic metal chromium and chromium-nickel stainless steels. Sbor. trud. TSNIICHM no.43:81-98 '65. (MIRA 18:10)

GOLUBEVA, L.S.; RUCH'YEVA, N.A.; POPLAVSKAYA, V.L.

Investigating the microstructure of powder alloys obtained by simultaneous reduction. Sbor. trud. TSNIICHM no.43:109-114 '65. (MIRA 18:10)

L 2847-66 EWP(e)/EWT(m)/EPF(c)/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b) LIP(c)
MJW/JD/WB

ACCESSION NR: AT5022891 UR/2776/65/000/043/0081/0098

AUTHOR: Shchegoleva, R. P.; Reutova, N. P.; Golubeva, L. S.; Poplavskaya, V. L.; Kazanskaya, L. N.

TITLE: Powdered-metal stainless chrome and chrome-nickel steels

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no. 43, 1965. Poroshkovaya metallurgiya (Powder metallurgy), 81-98

TOPIC TAGS: powder metallurgy, stainless steel, chromium steel, nickel steel, corrosion resistance

ABSTRACT: It is shown that the powders of stainless chrome and chrome-nickel steels in the ferritic, austenitic, and martensitic-austenitic classes, prepared by the method of the combined reduction of metal oxides by means of CaH_2, are suitable for the industrial fabrication of porous and compact sheets and strips by the direct method of powder rolling. The flowsheet of production of these powders has the following sequence: raw materials -- iron powder (carbonyl and other types of Fe), chromium oxide (Cr_2O_3), nickel (electrolytic, carbonyl)

Card 1/3

ACCESSION NR: AT5022891

powder or NiO, Ni_2O_3, calcium hydride (CaH_2); charge blending (2.5 hr); reduction at 1175°C for 6-8 hr, $Cr_2O_3 + 3CaH_2 = 2Cr + 3CaO + 3H_2$; crushing of sinter; slaking with H_2O and pulverization; hydrocyclone treatment of pulp; leaching -- $Ca(OH)_2 + 2HCl = CaCl_2 + 2H_2O$; washing to remove $CaCl_2$; centrifuging; vacuum drying, 60-70°C. Sintered stainless steels display high physical properties, which warrants recommending them for the fabrication of the elements and devices performing in aggressive media. When pressed under a pressure of 10 t/cm^2 and subjected to deformation and heat treatment, powdered-metal stainless steels are not inferior to steels produced by the smelting method as regards their physical properties and corrosion resistance. Thus, for example, corrosion tests of Kh18N15 stainless austenite steel in a 65% solution of boiling HNO_3 demonstrated the high corrosion strength of this steel, not inferior to that of deformed cast steel (corrosion rate 0.1-0.16 g/m^2-hr). Evidently these good qualities of powdered-metal stainless steels are attributable to the low content of impurities in the powders prepared by the combined oxide reduction method. Orig. art. has: 10 figures, 9 tables.

ASSOCIATION: none

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342230002-4"

L 2847-66
ACCESSION NR: AT5022891

SUBMITTED: 00 ENCL: 00 SUB CODE: MM,

NO REF SOV: 007 OTHER: 007

BVK
Card 3/3

89624

18.1285

S/129/61/000/004/005/012
E073/E535

AUTHORS: Petunina, Ye. V., Candidate of Technical Sciences, and Poplavskaya, V. L.

TITLE: Influence of Low Hydrogen Contents on the Properties of Titanium Alloys

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1961, No.4, pp.25-27 + 1 plate

TEXT: Published results on the influence of hydrogen on titanium and titanium alloys (Refs.2-4) were obtained for circular or square specimens with or without notches. The results described in this paper were obtained for flat specimens of industrially produced sheets of a composition as shown in Table 1 and with the mechanical properties as given in Table 2. Commercially pure titanium ИМПIA (IMP1A) and the titanium alloy ИМП7 (IMP7) for a single-phase α-structure are less prone to hydrogen embrittlement than alloys with a two-phase structure. In the initial state the alloy IMP1A had a hydrogen content of 0.010 to 0.015% and the alloy IMP7 had a hydrogen content of 0.004 to 0.006%. The influence of degassing of sheets, 3, 2, 1.5, 1, 0.75 and 0.5 mm thick, on the mechanical properties in short duration tensile tests was investigated.

Card 1/4

Influence of Low Hydrogen Contents...

The degassing was in a vacuum of 10^{-3} mm Hg at 800°C for two hours. After degassing, the hydrogen contents were 0.003-0.0015% and 0.0015-0.001%, respectively. The influence of degassing on the mechanical properties as a function of the thickness of the specimens, mm, are plotted in Fig.2, where curves 1 refer to the degassed state and curves 2 refer to the non-degassed state. The graph, Fig.2a - UTS σ_b, kg/mm^2, b -bending angle, $\alpha°$, β - elongation, δ%. A reduction of the hydrogen content from 0.004 to 0.001% in the case of the alloy IMP7 showed a considerable influence on the mechanical characteristics; a hydrogen content below 0.001% showed a considerable influence on the strength of titanium foils in the thickness range 0.1 to 0.02 mm. The two alloys showed a differing behaviour in the degassed state and this is attributed to the fact that these alloys had a differing proneness to hydrogen embrittlement. Obviously, the sensitivity to hydrogen embrittlement depends on the nature of the alloying. Changes in the strength, bending angle and elongation for very low hydrogen contents, established in specimens less than 3 mm thick, indicates that with decreasing thickness of the material the test conditions change considerably. The smaller the thickness of the specimen, the larger

will be the ratio of the surface to the cross-section. The effect of brittle lamellae of titanium hydride protruding to the surface of the specimen is similar to that of micro-notches; this effect is slight in the case of small surface to cross-section ratios but increases with increasing ratio. The obtained results show that the specifications regarding hydrogen contents should be more rigid for thin sheets and foils of titanium and titanium alloys than for thicker material. There are 2 figures, 2 tables and 4 references: 1 Soviet and 3 non-Soviet.

ASSOCIATION: TsNIIChM

Table 1

Contents in %

Марка сплава Alloy type	Содержание элементов в %							
	Al	V	O	N	H	Si	Fe	Ni
ИМП1А (IMP 1A)	—	—	0,18	0,04	0,004	0,08	0,25	0,15
ИМП7 (IMP 7)	3	2	0,16	0,03	0,01	0,06	0,3	0,10

Table 2

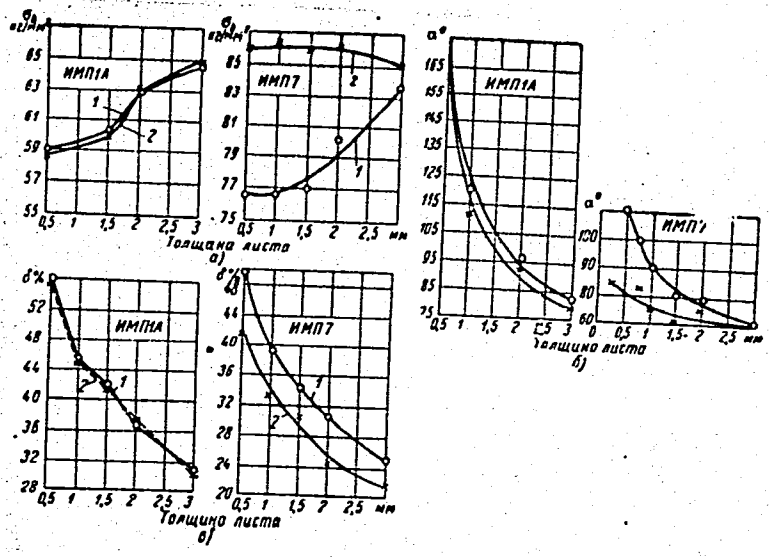
Mechanical properties

Марка сплава Alloy type	Механические свойства				
	σ_b kg/mm² в кг/мм²	$\sigma_{0,2}$ kg/mm² в кг/мм²	δ в %	ψ в %	a_k в кгм/см² kgm/cm²
ИМП1А (IMP 1A)	68,5	56,6	25,5	48	6,0
ИМП7 (IMP 7)	85,2	76,6	20,0	50	5,5

Card 3/4

89624

Influence of Low Hydrogen Contents... S/129/61/000/004/005/012
E073/E535



Card 4/4

Fig.2

POPLAVSKAYA, Ye.A.; RZHANINOV, S.N.; BUGROVA, V.P.

Use of indicator discs with antibiotics on Ploskirev's medium for the increase of the growth rate of dysentery bacilli. Zhur. mikrobiol., epid. i immun. 41 no.11:12-13 '65. (MIRA 18:5)

1. Sanitarno-bakteriologicheskaya laboratoriya goroda Elektrostal' Moskovskoy oblasti.

POPLAVSKAYA, Ye.A.; BUGROVA, V.P.; RZHANINOV, S.N.

Experience in the use of media with syntomycin for increasing growth rate of dysentery bacteria. Zhur. mikrobiol., epid. i immun. 40 no.2:103-104 F '63. (MIRA 17:2)

1. Iz sanitarno-bakteriologicheskoy laboratorii g. Elektrostali Moskovskoy oblasti.

POPLAVSKAYA, Ye.A.

ZHUMATOV, Kh.Zh.; DEMIDOVA, S.I.; BITAYAN, V.V.; POPLAVSKAYA, Ye.A.; GOL'BERG, R.S.

Materials on the variability of the bacillary dysentery bacteria in the human organism. Zhur. mikrobiol. epid. i immun. no.10:97 O '54. (MLRA 8:1)

1. Iz Kazakhskogo instituta epidemiologii, mikrobiologii i gigiyeny.
(SHIGELLA DYSENTERIAE)

POPLAVSKIY, A.A.

Determining the depth of the focus of near-subcrustal earthquakes by the epicentral distance, running time, and hodograph derivative. Geol. i geofiz. no.8:87-96 '65. (MIRA 18:9)

1. Sakhalinskiy kompleksnyy nauchno-issledovatel'skiy institut Sibirskogo otdeleniya AN SSSR, selo Novo-Aleksandrovsk.

L 13084-66 EWT(1)/EWA(h) GW
ACC NR: AP6001293 SOURCE CODE: UR/0210/65/000/008/0087/0096

AUTHOR: Poplavskiy, A. A.

28 B

ORG: Sakhalin Scientific Research Institute of Comprehensive Studies, Siberian Department, AN SSSR, Novo-Aleksandrovsk (Sakhalinskiy kompleksnyy nauchno-issledovatel'skiy institut Sibirskogo otdeleniya AN SSSR)

TITLE: Determining the depth of the focus for a nearby sub-crustal earthquake from the epicentral distance, running time and derivative of the time-travel curve 12,44,55

SOURCE: Geologiya i geofizika, no. 8, 1965, 87-96

TOPIC TAGS: earthquake, seismology, hodograph

ABSTRACT: An analytical formula is given for determining the location of the focus of a nearby earthquake with respect to depth. Expressions are derived for calculating the parameters appearing in this formula which account for epicentral distance, running time and the derivative of the time-travel curve. The model proposed for the medium is a uniform plane-parallel layer which lies on a homogeneous half space. The solution of the problem is based on concepts in geometric seismics using

Card 1/2

UDC: 550.34

L 13084-66

ACC NR: AP6001293

hypothetical (S-P)-waves for two cases: a) when the parameters of the medium are known, b) when they are unknown. Nomograms are given for determining the derivative of the time-travel curve. A table is given showing data from determination of the depth of the foci for nine comparatively shallow earthquakes. The computational error is analyzed. Orig. art. has: 3 figures, 4 tables, 11 formulas.

SUB CODE: 08/ SUBM DATE: 18Nov64/ ORIG REF: 001/ OTH REF: 000

Card 2/2 HW

POPLAVSKIY, A. I. Cand Tech Sci

Dissertation: "Static Method in the Kinematic Analysis and Synthesis of the Plane Mechanisms in Sewing Machines."

1/7/50

Moscow Technological Inst of Light Industry imeni L. M. Kaganovich

SO Vecheryaya Moskva
Sum 71

POPLAVSKIY, A.I.

124-11-12452

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr 11, p 18 (USSR)

AUTHOR: Poplavskiy, A. I.

TITLE: Design of a Plane Four-bar Linkage to Satisfy the Given Motions of the Driving and the Driven Bars. (Proyektirovaniye ploskogo chetyrekh-zvennika po zadannym dvizheniyam vedushchego i vedomogo zvenyev)

PERIODICAL: Nauchn. tr. Mosk. tekhnol. in-t legkoy prom-sti, 1957, Nr. 8, pp 303-314.

ABSTRACT: Bibliographic entry.

Card 1/1

124-58-6-6346

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 6, p 9 (USSR)

AUTHOR: Poplavskiy, A. I.

TITLE: Using Graphostatic Methods in the Kinematic Analysis of Plane Mechanisms With Lower (Closed) Pairs (Grafoanaliticheskiye metody statiki v kinematicheskom analize ploskikh mekhanizmov s nizshimi parami)

PERIODICAL: Nauchn. tr. Mosk. tekhnol. in-t legkoy prom-sti, 1957, Nr 9, pp 292-313

ABSTRACT: To determine the angular velocities of the relative angular motions of the links of a kinematic linkage it is recommended that equations for the "equilibrium" of the angular velocities be set up, equations similar to the static equations for the equilibrium of forces. The methods for setting up and solving these velocity-"equilibrium" equations are illustrated by examples. To determine the relative angular accelerations, somewhat more complicated equations are set up.

1. Mechanical drives--Mathematical analysis

S. G. Kislitsyn

Card 1/1

POPIAVSKIY, A.K.

Psychotherapy of verruca. Vest. derm. i ven. 32 no.6:81-83 N-D '58. (MIRA 12:1)

1. Iz Korsun'-Shevchenkovskogo medob"yedineniya (glavnyy vrach S.G. Bitus) i Malinskogo medob"yedineniya (glavnyy vrach Yu. Ye. Intsenko)

(VERRUCA, ther.
psychother. (Rus))
(PSYCHOTHERAPY
of verruca (Rus))

POPLAVSKIY, A.K.

Psychotherapy in the clinical treatment of internal diseases. Vrach.delo no.2:189 F '59. (MIRA 12:6)

1. Kafedra terapii sanitarno-gigiyenicheskogo fakul'teta (zav. - prof.V.A.El'berg) Kiyevskogo meditsinskogo instituta. (PSYCHOTHERAPY)

POPLAVSKIY, A.K.

Hypnotherapy of smoking. Vrach.delo no.8:863-865 Ag '59. (MIRA 12:12)

1. Kafedra nervnykh bolezney (zav. - deystvitel'nyy chlen AMN SSR, prof. B.N. Man'kovskiy) Kiyevskogo meditsinskogo instituta, Korsun'-Shevchenkovskaya rayonnaya bol'nitsa Cherkasskoy oblasti i Malinskaya rayonnaya bol'nitsa Zhitomirskoy oblasti.
(SMOKING) (HYPNOTISM--THERAPEUTIC USE)

POPLAVSKIY, A.K. (Malin, Zhitomirskoy oblasti)

Treatment of sexual impotence in men by hypnotic suggestion. (MIRA 12:10)
Kaz.med.zhur. 40 no.1:85-86 Ja-F '59.
(IMPOTENCE) (HYPNOTISM--THERAPEUTIC USE)

POPLAVSKIY, A.M.

Improving the management of the Stalingrad Liqueur and Vodka Plant. Spirt.prom. 26 no.1:36 '60. (MIRA 13:6)
(Stalingrad--Liquor industry)

AMFINOGENOVA, Ye.N.; POPLAVSKIY, A.K.

Labor complicated by subcutaneous emphysema. Sov.med. 26 no.12: 68-69 D '62. (MIRA 16:2)

1. Iz kafedry akusherstva i ginekologii No.2 (zav. - dotsent T.Ya. Kalinichenko) Kiyevskogo ordena Trudovogo Krasnogo Znameni meditsinskogo instituta imeni akademika A.A. Bogomol'tsa.
(EMPHYSEMA) (LABOR, COMPLICATED)

POPLAVSKIY, A.K.

Subcutaneous emphysema in obstetrical practice. Kaz. med. zhur. no.6: 36-38 N-D '61. (MIRA 15:2)

1. Kafedra akusherstva i ginekologii No.2 (zav. - dotsent T.Ya. Kalinichenko) Kiyevskogo ordena Trudovogo Krasnogo Znameni meditsinskogo instituta imeni akademika A.A.Bogomol'tsa.
(EMPHYSEMA) (LABOR, COMPLICATED)

POPLAVSKIY, A.K.

Practical psychotherapy. Vrach. delo no.6:138-139 Je '61.
(MIRA 15:1)

1. Kafedra akusherstva i ginekologii II (zaveduyushchiy - dotsent T.Ya.Kalinichenko) i kafedra terapii sanitarno-gigiyenicheskogo fakul'teta (zaveduyushchiy - prof. V.A.El'berg) Kiyevskogo ordena Trudovogo Krasnogo Znameni meditsinskogo instituta im. akademika A.A.Bogomol'tsa, Korsun'-Shevchenkovskaya rayonnaya bol'nitsa i Malinskaya rayonnaya bol'nitsa. Nauchnyy rukovoditel' raboty - deystvitel'nyy chlen AMN SSSR, prof. B.N.Man'kovskiy.
(PSYCHOTHERAPY)

POPOLZIN, A.G.; TRIFONOVA, T.M.; RYBAKOV, G.G.

Freshwater lakes of the Teniz-Kurgal'dzhin Lowland. Trudy otd. geog. AN Kazakh. SSR no.9:3-62 '62. (MIRA 15:6)
(Teniz-Kurgal'dzhin Lowland--Lakes)

POPLAVSKIY, A.K. [Poplavs'kyi, A.K.]

Effect of emotions induced during hypnosis on muscular working capacity and its restoration. Fiziol. zhur. [Ukr.] 6 no.6:714-720 N-D '60. (MIRA14:1)

1. Department of Labor Hygiene of the Kiev Medical Institute.
(HYPNOTISM) (WORK)

POPLAVSKIY, A.K. (Malin, Zhitomirskoy oblasti)

Psychotherapy in gynecology. Kaz. med. zhur. no. 2:111 Mr-Ap '61. (MIRA 14:4)

(PSYCHOTHERAPY) (GENERATIVE ORGANS, FEMALE--DISEASES)

POPLAVSKIY, A.K. (Malin)

Psychotherapy in obstetrical practice. Kaz. med. zhur. no. 4:93 Jl-Ag '60. (MIRA 13:8)
(PSYCHOTHERAPY) (OBSTETRICS)